RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	10/561, 015
Source:	TFWP.
Date Processed by STIC:	12/30/2005
	, ,

ENTERED



IFWP

RAW SEQUENCE LISTING DATE: 12/30/2005
PATENT APPLICATION: US/10/561,015 TIME: 09:36:55

Input Set: A:\Sequence Listing PCTUS04019934.txt
Output Set: N:\CRF4\12302005\J561015.raw

3 <110> APPLICANT: Felsenfeld, Dan P.

Verse-Pierluissi, Maria A. 6 <120> TITLE OF INVENTION: METHODS AND AGENTS FOR TREATING AXONAL DAMAGE, INHIBITION OF NEUROTRANSMITTER RELEASE AND PAIN TRANSMISSION, AND BLOCKING CALCIUM INFLUX IN NEURONS 10 <130> FILE REFERENCE: 02420/100M761-US1 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/561,015 C--> 12 <141> CURRENT FILING DATE: 2005-12-16 12 <150> PRIOR APPLICATION NUMBER: 60/480,092 13 <151> PRIOR FILING DATE: 2003-06-19 15 <150> PRIOR APPLICATION NUMBER: PCT/US04/19934 16 <151> PRIOR FILING DATE: 2004-06-21 18 <160> NUMBER OF SEQ ID NOS: 27 20 <170> SOFTWARE: PatentIn version 3.3 22 <210> SEQ ID NO: 1 23 <211> LENGTH: 12 24 <212> TYPE: PRT 25 <213> ORGANISM: Artificial sequence 27 <220> FEATURE: 28 <223> OTHER INFORMATION: synthetic protein 30 <400> SEQUENCE: 1 32 Gln Phe Asn Glu Asp Gly Ser Phe Ile Gly Gln Tyr 33 1 10 36 <210> SEQ ID NO: 2 37 <211> LENGTH: 12 38 <212> TYPE: PRT 39 <213 > ORGANISM: artificial sequence 41 <220> FEATURE: 42 <223> OTHER INFORMATION: sythetic protein 44 <400> SEQUENCE: 2 46 Gln Phe Asn Glu Asp Gly Ser Phe Ile Gly Gln Phe 47 1 10 50 <210> SEQ ID NO: 3 51 <211> LENGTH: 28 52 <212> TYPE: PRT 53 <213> ORGANISM: artificial sequence 55 <220> FEATURE: 56 <223> OTHER INFORMATION: synthetic protein 58 <400> SEQUENCE: 3 60 Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys Lys 5 64 Gln Phe Asn Glu Asp Gly Ser Phe Ile Gly Gln Phe

20

65

Input Set : A:\Sequence Listing PCTUS04019934.txt

Output Set: N:\CRF4\12302005\J561015.raw

```
68 <210> SEQ ID NO: 4
69 <211> LENGTH: 3797
70 <212> TYPE: DNA
71 <213> ORGANISM: Rattus rattus
73 <400> SEOUENCE: 4
                                                                          60
74 gctagctatg gtcgtgatgc tgcggtacgt gtggcctctc ctcctctgca gcccctgcct
76 gctcatacag attcctgatg aatataaagg acaccatgta ctagagccac ctgtcatcac
                                                                         120
                                                                         180
78 ggaacagtct ccacggcgcc tggttgtctt cccaacagat gacataagcc tcaaatgtga
                                                                         240
80 agccagaggc agaccccaag tggagttccg ctggacgaaa gatggcatcc acttcaaacc
82 taaqqaaqaa ttgggtgtag tggtacacga ggcaccctat tctggctcct tcaccatcga
                                                                         300
                                                                         360
84 aggcaacaac agctttgccc agaggtttca gggcatctat cgctgctatg ccagcaataa
86 tctaggaact gccatgtcgc atgagatcca gctcgtggct gagggtgccc ccaaatggcc
                                                                         420
                                                                         480
88 gaaggagact gtaaaacccg tggaagtgga ggaaggagaa tcagtagttc taccttgcaa
                                                                         540
90 tectecacce agtgeagece caettaggat etactggatg aacageaaga ttttgeacat
                                                                         600
92 caaacaaqat qagcgggtgt ccatgggcca gaatggagac ctatattttg ccaatgtgct
94 tacctcagac aatcattcag actacatctg caatgcccac ttccctggca cccggaccat
                                                                         660
96 cattcaaaag gaacctattg acctccgggt caagcccacc aacagcatga ttgaccggaa
                                                                         720
                                                                         780
98 qccacqcctq ctcttcccca caaactccag cagtcacctc gtggccttgc agggccagtc
100 attaatcctg gagtgcattg ctgagggatt ccctacaccc accatcaagt ggctgcaccc
                                                                          840
                                                                          900
102 cagtgaccct atgccaacag accgtgttat ctaccagaac cataacaaga cactgcagct
104 cctcaatgtg ggcgaggaag atgatggcga gtatacctgc cttgctgaga actcactggg
                                                                          960
                                                                         1020
106 caqtqctcqq catqcctact atgtcactgt ggaagctgcc ccatactggc tgcagaagcc
108 ccagagtcat ttgtatgggc caggagagac tgcccgccta gactgccaag tccagggcag
                                                                         1080
                                                                         1140
110 gccccaacca gaggtcactt ggagaatcaa cggaatgtct atagagaagg tgaacaagga
112 ccagaagtac cggattgagc aggggtcttt gatcctgagt aatgtgcaac caagtgacac
                                                                         1200
                                                                         1260
114 aatggtgacc cagtgtgaag ctcgcaacca gcatgggctc ctactagcca atgcctatat
116 ctatgttgtc cagctgccag ccaggatcct aacaaaagac aatcagacat acatggcagt
                                                                         1320
118 agagggcagt actgcttact tgctgtgcaa agcctttgga gctcctgttc ccagtgtcca
                                                                         1380
120 gtggctggat gaggaaggaa ccacagtgct tcaggatgaa agatttttcc cctatgccaa
                                                                         1440
122 tggaacgctg ggcatcagag atctccaggc caatgacact ggacgctatt tctgccaggc
                                                                         1500
                                                                         1560
124 tgccaatgac cagaacaatg tgaccatttt ggctaaccta caggttaaag aagcaaccca
                                                                         1620
126 gatcacacaa ggaccccgga gcacaattga gaagaaaggt gcaagggtga cattcacgtg
128 ccaggcctcc tttgacccct ctttacaagc cagcatcact tggcgtggag atgggagaga
                                                                         1680
                                                                         1740
130 cctccaggaa cgtggagaca gtgacaagta tttcatagaa gatgggcaac ttgtcatcca
132 gagcctggac tacagtgacc agggcaacta cagttgtgtg gccagcactg aactggatga
                                                                         1800
                                                                         1860
134 qqtqqaqaqc aqqqcacaac tcttagtggt gggaagccct gggccagtgc ctcacctgga
                                                                         1920
136 qctqtccqac cqccacttqc tgaaqcagag ccaggtgcac ttgtcttgga gccctgctga
                                                                         1980
138 agaccacac teteccattg agaaatatga cattgaattt gaggacaagg aaatggetee
                                                                         2040
140 tgagaaatgg ttcagtctag gcaaggtgcc aggaaatcag acctctacta ccctcaagct
142 gtccccctat gtccactata cctttcgggt cactgccatt aacaaatatg gtcccggaga
                                                                         2100
                                                                         2160
144 acccagecet gtetetgaga etgtagteae acetgaggea geeccagaga agaaceetgt
                                                                         2220
146 ggatgtgaga ggggaaggaa atgagaccaa caatatggtc atcacatgga agccccttcg
                                                                         2280
148 gtggatggat tggaatgccc cccagattca gtaccgtgta cagtggcgac cactgggcaa
                                                                         2340
150 acaagagacc tggaaggaac agaccgtgag cgaccccttc ctggtggtgt ctaacacttc
                                                                         2400
152 cacatttgtg ccttatgaga tcaaagtcca ggcagtgaac aaccagggga agggccctga
                                                                         2460
154 gccccaggtc accattggct attcagggga agactacccc caggtgagcc ctgagcttga
156 agacatcaca atcttcaact caagcactgt gctggtcagg tggaggcctg tggacttggc
                                                                         2520
                                                                         2580
158 ccaqqttaaq qqccacctca qqqqatacaa tgtaacgtac tggtggaagg gcagtcagag
                                                                         2640
160 aaagcacagc aagaggcatg tccacaaaag tcacatggtg gtacctgcga acaccaccag
```

Input Set : A:\Sequence Listing PCTUS04019934.txt

Output Set: N:\CRF4\12302005\J561015.raw

```
162 tqccatcctc agtgqtttgc qtccttacag ctcttatcat gtggaggtac aggcctttaa
                                                                         2700
164 tqqqcqqqc ttaqqqcctq caaqtqaatq gaccttcagc accccagagg gagtgcctgg
                                                                         2760
166 ccaccctgag gcattacatc tggagtgcca gtcggacact agcctgctac tgcactggca
                                                                         2820
168 gccaccacte agccacaatg gagtgeteac tggetacetg etetettace atccettgga
                                                                         2880
170 tqgggaaagc aaagagcagt tgttcttcaa cctttcggac ccagagctcc ggactcataa
                                                                         2940
172 tctcaccaac ctcaaccctg atctacagta ccgcttccag cttcaggcca ccacccaaca
                                                                         3000
174 gggtcctggt gaggccattg tgcgtgaagg aggcactatg gccctatttg gcaagccaga
                                                                         3060
176 ttttggcaac atttcagtca cagcaggtga aaactacagt gtggtctcct gggtccctcg
                                                                         3120
178 ggagggccag tgcaatttca ggttccacat cctgttcaaa gccttgccag aagggaaagt
                                                                         3180
180 gagecetgat caccageete agecteaata tgtgagetae aatcagaget eetacacaca
                                                                         3240
182 gtgggaccta cagcctgaca ccaaatatga gatccacctg atgagggaga aggtcctctt
                                                                         3300
184 gcaccatctg gctgtgaaga ctaatggcac tggccccgtg cgagtgtcga ctaccggtag
                                                                         3360
186 ctttgcctcc gagggctggt tcatcgcctt tgtcagtgct atcattctct tgctcctcat
                                                                         3420
                                                                         3480
188 cetgeteate etetgettea teaaaegeag caagggegge aaatatteag tgaaggacaa
                                                                         3540
190 ggaggacact caggtagatt ccgaggcccg gcccatgaaa gacgagacct tcggcgagta
192 caggtccctg gagagtgaca atgaagagaa ggccttcggc agcagccagc catctctcaa
                                                                         3600
194 tggagacatc aaacccctag gcagtgatga cagtctggct gattatgggg gcagtgtgga
                                                                         3660
                                                                         3720
196 tgtccagttc aatgaggatg gctctttcat cggccaatac agtggcaaaa aagagaagga
198 ggcagcggga ggcaatgaca gctcaggggc tacctctcct atcaatcctg cagtagccct
                                                                         3780
200 agaatagcaa gctcgag
                                                                         3797
203 <210> SEQ ID NO: 5
204 <211> LENGTH: 1259
205 <212> TYPE: PRT
206 <213> ORGANISM: Rattus rattus
208 <400> SEQUENCE: 5
210 Met Val Val Met Leu Arg Tyr Val Trp Pro Leu Leu Cys Ser Pro
211 1
214 Cys Leu Leu Ile Gln Ile Pro Asp Glu Tyr Lys Gly His His Val Leu
215
                20
                                    25
218 Glu Pro Pro Val Ile Thr Glu Gln Ser Pro Arg Arg Leu Val Val Phe
222 Pro Thr Asp Asp Ile Ser Leu Lys Cys Glu Ala Arg Gly Arg Pro Gln
223
226 Val Glu Phe Arg Trp Thr Lys Asp Gly Ile His Phe Lys Pro Lys Glu
227 65
230 Glu Leu Gly Val Val His Glu Ala Pro Tyr Ser Gly Ser Phe Thr
231
                    85
                                        90
234 Ile Glu Gly Asn Asn Ser Phe Ala Gln Arg Phe Gln Gly Ile Tyr Arg
                                    105
235
                100
238 Cys Tyr Ala Ser Asn Asn Leu Gly Thr Ala Met Ser His Glu Ile Gln
239
                                120
242 Leu Val Ala Glu Gly Ala Pro Lys Trp Pro Lys Glu Thr Val Lys Pro
243
        130
                            135
                                                 140
246 Val Glu Val Glu Glu Gly Glu Ser Val Val Leu Pro Cys Asn Pro Pro
                                            155
250 Pro Ser Ala Ala Pro Leu Arg Ile Tyr Trp Met Asn Ser Lys Ile Leu
                                        170
254 His Ile Lys Gln Asp Glu Arg Val Ser Met Gly Gln Asn Gly Asp Leu
255
                                    185
```

Input Set : A:\Sequence Listing PCTUS04019934.txt
Output Set: N:\CRF4\12302005\J561015.raw

287 305 Tyr Tyr Tyr Val Thr Val Glu Ala Ala Pro Tyr Tyr Leu Glu Ala Ala Pro Tyr Tyr Leu Glu 330 330 1 Leu Asp 335	250	П	Dha	ח ד ת	7.00	77-7	T 011	The	Cor	7 00	7.00	uia	C0~	7 an	T1	Tlo	Caro
262 Asn Ala His Phe Pro Gly Thr Arg Thr Ile Ile Gln Lys Glu Pro Ile 263 210 215 270 22		ıyı	Pile		ASII	vai	ьец	TIII		Asp	ASII	птэ	Ser	_	TYL	116	СуБ
266		Aen	Δla		Dhe	Pro	Glv	Thr		Thr	Tle	Tle	Gln		Glu	Pro	Tle
266 256 257 258 269 279 270		ASII		1113	1110	110	Cly		-11-9	****	110	110			014		
240 270 275 280 280 285 240 270 280 285 280 285 280 285 280 285 280 285 280 285 280 285 280 280 285 280		Asn		Ara	Val	Lvs	Pro		Asn	Ser	Met.	Ile		Ara	Lvs	Pro	Ara
270 Leu Leu Phe Pro Thr Ash Ser Ser Ser His Leu Val Ala Leu Gln Gly 275 274 Gln Ser Leu Ile Leu Glu Cys Ile Ala Glu Gly Phe Pro Thr Pro Thr 275 260 275 280 285		_				_, _								5	-1-		
271			Leu	Phe	Pro	Thr		Ser	Ser	Ser	His		Val	Ala	Leu	Gln	
The color The								-									-
275 11e Lys Trp Leu Hrs Pro er het Pro Net Pro Net Pro Net 285 Arg Ag Val I le 275 285 285 1285 280 280 Asp Asp <td></td> <td>Gln</td> <td>Ser</td> <td>Leu</td> <td>Ile</td> <td>Leu</td> <td>Glu</td> <td>Cys</td> <td>Ile</td> <td>Ala</td> <td>Glu</td> <td>Gly</td> <td>Phe</td> <td>Pro</td> <td>Thr</td> <td>Pro</td> <td>Thr</td>		Gln	Ser	Leu	Ile	Leu	Glu	Cys	Ile	Ala	Glu	Gly	Phe	Pro	Thr	Pro	Thr
275								•				_					
282 Tyr Gln Asn His Asn Lys Thr Leu Gln Leu Asn Val Gly Glu Glu Glu Zys Ser Leu Asn Val Gly Ser Ala Ser Leu Glu Asn Ser Leu Gly Ser Ala Asn Ser Leu Gly Ser Leu Gly Ser Leu Gly Fro Gly Asn Asn Asn Asn July Asn Asn Asn Leu Asn Asn Asn Asn Asn Asn As	278	Ile	Lys	Trp	Leu	His	Pro	Ser	Asp	Pro	Met	Pro	Thr	Asp	Arg	Val	Ile
288																	
286 Asp Asp Gly Glu Tyr Thr Cys Leu Ala Asn Ser Leu Gly Ser Lau 310 315 315 315 320 320 320 320 320 320 330 350 330 350 350 350 360 <td>282</td> <td>Tyr</td> <td>Gln</td> <td>Asn</td> <td>His</td> <td>Asn</td> <td>Lys</td> <td>Thr</td> <td>Leu</td> <td>Gln</td> <td>Leu</td> <td>Leu</td> <td>Asn</td> <td>Val</td> <td>Gly</td> <td>Glu</td> <td>Glu</td>	282	Tyr	Gln	Asn	His	Asn	Lys	Thr	Leu	Gln	Leu	Leu	Asn	Val	Gly	Glu	Glu
287 305 Ty Tyr Tyr Val Thr Val Glu Ala Ala Pro Tyr Leu Glu Ala Ala Pro Tyr Tyr Leu Glu Ala Ala Pro Tyr Leu Glu Ala Ala Arg Leu Ala Ala Ala Arg Leu Ala																	
290 Arg His Ala Tyr Tyr Val Thr Val Glu Ala Ala Pro Tyr Trp Leu Gln 335 330 330 335	286	Asp	Asp	Gly	Glu	Tyr	Thr	Cys	Leu	Ala	Glu		Ser	Leu	Gly	Ser	
291 yr Pro Gln Ser His Leu Tyr Gly Pro Gly Thr Ala Arg Leu Asp 292 335 135 135 120 Asp 345 345 355 350 120 Asp 365 365 350 350 350 350 350 350 350 350 350 350 350 350 350 360 365 365 365 365 360 360 360 365 365 360 360 360 360 360 360 360 370 370 375 375 380										_	_						
294 Lys		Arg	His	Ala	Tyr	_	Val	Thr	Val	Glu		Ala	Pro	Tyr	Trp		Gln
295 Cys Gln Val Gln Gly Arg Pro Gln Pro Glu Val Thr Trp Arg Ile Asn 299 355 Trp 360 160 Val Thr Trp Arg Ile Asn 298 11 Trp Arg Ile Asn 298 Gln Lys Trp Trp Arg Ile Glu Asn Lys Asn Lys Asn		_	_		_		_	_	~-	_		~7	_,				
298 Cys Gln Val Gln Gln Gln Arg Pro Gln Pro Gln Val Thr Trp Arg Ile Asn 299 355 355 360 370 375 375 375 375 380 380 380 370 370 375 375 380 38		Lys	Pro	GIn		His	Leu	Tyr	GIY		GIY	GIU	Tnr	Ата	_	ьeu	Asp
299 Gly Met Ser Ite Str. It		~	~ 1	**- 7		a1	7	D	~1		~1	*** 7	mla sa	TT		T1.	7 ~~
302 Gly Met Ser Ile Ser Ile Glu Lys Val Asn Lys Asp Gln Lys 380 Gln Lys Tyr Arg Ile Glu 303 Gln Gly Ser Leu Ile Leu Ser Asn Val Gln Pro Ser Asp Thr Met Val 307 385 Gln Gly Ser Leu Ile Leu Ser Asn Val Gln Pro Ser Asp Thr Met Val 307 385 Glu Ala Asp Asn Gln His Gly Leu Leu Leu Leu Ala Asn Ala 311 405 405 410 Leu Leu Leu Leu Ala Asn Ala 311 415 415 416 415 416 416 415 416 416 416 416 416 415 416 418		_	GIN		GIN	GIY	Arg	Pro		Pro	GIU	vaı	THE		Arg	iie	ASII
303 G17 Ser Leu Ile Leu Ser Asn Val Gln Pro Ser Asp Thr Met Val 306 G1n G1y Ser Leu Ile Leu Ser Asn Val Gln Pro Ser Asp Thr Met Val 310 Thr G1n Cys Glu Ala Arg Asn Glu His Gly Leu Leu Leu Asn Ala 311 Tyr G1n Val G1n Leu Pro Ala Arg Ile Leu Ala Asn Ala 315 Tyr G1n Val G1n Leu Pro Ala Arg Ile Leu Thr Lys Asp Asp Ala Arg Ala Arg Ile Ala Arg Arg Arg Arg A			Mot		Tlo	C1,1	Tarc	To I		Lvc	Λαn	Gln	Larc		λrα	Tla	Glu
306 Gln Gln Gln Ser Leu Ile Leu Ser Asn Val 395 Image: Ser Asn 400 395 Image: Ser Asn 400 395 Image: Ser Asn 400 395 Image: Ser Image: Ser 400 400 395 Image: Ser Image: Ser 400 400 400 400 410 Image: Ser Image: Ser <td></td> <td>GIY</td> <td></td> <td>SET</td> <td>TTE</td> <td>Giu</td> <td>цуъ</td> <td></td> <td>ASII</td> <td>пуъ</td> <td>Asp</td> <td>GIII</td> <td>_</td> <td>TAT</td> <td>Arg</td> <td>116</td> <td>Giu</td>		GIY		SET	TTE	Giu	цуъ		ASII	пуъ	Asp	GIII	_	TAT	Arg	116	Giu
307 385		Gln		Ser	Len	Tle	Len		Asn	Val	Gln	Pro		Asp	Thr	Met.	Val
310 Thr Gln Cys Glu Ala Arg Asn Gln His Gly Leu Leu Ala Asn Ala 311 Tyr Ile Tyr Val Val Gln Leu Pro Ala Arg Ile Leu Thr Lys Asp Asp Asn 315 Tyr Ile Tyr Val Val Glu Gly Ser Thr Ala Tyr Leu Cys Lys 318 Gln Thr Tyr Met Ala Val Glu Gly Ser Thr Ala Tyr Leu Cys Lys 319 Tyr Aso Gly Aso Gly Aso Gly Aso Gly Aso A			017	501							U						
311 Tyr 11e Tyr Val Val Gln Leu Pro Ala Arg 11e Leu Thr Lys Asp Asp Asp Asp 11e Leu Thr Lys Asp A			Gln	Cvs	Glu	Ala		Asn	Gln	His	Gly		Leu	Leu	Ala	Asn	Ala
315 420 425 425 430 430 430 430 430 430 430 425 430 4				- 2							_						
318 Gln Thr Tyr Met Ala Val Glu Gly Ser Thr Ala Tyr Leu Leu Cys Lys 319	314	Tyr	Ile	Tyr	Val	Val	Gln	Leu	Pro	Ala	Arg	Ile	Leu	Thr	Lys	Asp	Asn
319 435 42 440 440 440 440 440 445 446 455 460 450 61u 61	315	_		_	420					425					430		
322 Ala Phe Gly Ala Pro Val Pro Ser Val Gln Trp Leu Asp Glu Asp Glu Glu Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Asp Glu Arg Fhe Phe Phe Phe Pro Tyr Ala Asn Gly Thr 480 Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly	318	Gln	Thr	Tyr	Met	Ala	Val	Glu	Gly	Ser	Thr	Ala	Tyr	Leu	Leu	Cys	Lys
323 450																	
326 Thr Thr Val Leu Gln Asp Glu Arg Phe Phe Phe Pro Tyr Ala Asn Gly Thr 327 465	322	Ala		Gly	Ala	Pro	Val		Ser	Val	Gln	\mathtt{Trp}		Asp	Glu	Glu	Gly
327 465 470 470 480 480 485 470 485 480 510 510 510 510 510 510 510 510 510 520 525 525 525 525 525 525 525 530 530 530 530 530 530 530 530 530 530 530 530 5									_			_					_,
330 Leu Gly Ile Arg Asp Leu Gln Ala Asn Asp Thr Gly Arg Tyr Phe Cys 331 485 490 495 495 334 Gln Ala Ala Asn Asp Gln Asn Asn Val Thr Ile Leu Ala Asn Leu Gln 335 500 500 510 - 510 338 Val Lys Glu Ala Thr Gln Ile Thr Gln Gly Pro Arg Ser Thr Ile Glu 339 515 520 525 525 342 Lys Lys Gly Ala Arg Val Thr Phe Thr Cys Gln Ala Ser Phe Asp Pro 343 - 530 535 535 540 - 550 346 Ser Leu Gln Ala Ser Ile Thr Trp Arg Gly Asp Gly Arg Asp Leu Gln 347 545 550 550 350 Glu Arg Gly Asp Ser Asp Lys Tyr Phe Ile Glu Asp Gly Gln Leu Val 351 565 575 575			Thr	Val	Leu	Gln	_	Glu	Arg	Phe	Phe		Tyr	Ala	Asn	Gly	
331			~1	- 1 -	3	3		G 1	77 -	7	7		a 1	T	Th	Db	
334 Gln Ala Ala Asn Asp Gln Asn Asn Val Thr Ile Leu Ala Asn Leu Gln 335		Leu	GLY	TTE	Arg	_	Leu	Gin	Ala	Asn		Thr	GIY	Arg	Tyr		Cys
335 Section Section		01 -	77.	77-	7 ~~		C1 n	7	7 an	370 J		T10	T 011	. ד ג	7 an		Cln
338 Val Lys Glu Ala Thr Gln Ile Thr Gln Gly Pro Arg Ser Thr Ile Glu 339		GIII	AIA	Ala		ASP	GIII	ASII	ASII		1111	Tre	neu	Ala		пеп	GIII
339 Lys S15		V= 1	Lare	Glu		Thr	Gln	Tle	Thr		Glv	Pro	Ara	Ser		Tle	Glu
342 Lys Lys Gly Ala Arg Val Thr Phe Thr Cys Gln Ala Ser Phe Asp Pro 343 Ser Leu Gln Ala Ser Ile Thr Trp Arg Gly Asp Gly Arg Asp Leu Gln 346 Ser Leu Gln Ala Ser Ile Thr Trp Arg Gly Arg Asp Leu Gln 347 Ser Arg Gly Asp Ser Asp Lys Tyr Phe Ile Glu Asp Gly Gln Leu Val 350 Ile Ile Ile Tyr Phe Ile Glu Asp Gly Gln Leu Val 351 Ile I		vai	шуз		AIG	T111	GIII	110		GIII	Gry	110	nr9		****	110	014
343		Lvs	Lvs		Ala	Ara	Val	Thr		Thr	Cvs	Gln	Ala		Phe	Asp	Pro
346 Ser Leu Gln Ala Ser Ile Thr Trp Arg Gly Asp Gly Arg Asp Leu Gln 347 545 555 550 560 560 560 560 565 575 575 575 575 575 575 575 575 575		-,,	_	0-1		5					-1-					<u>F</u>	
347 545 550 555 560 350 Glu Arg Gly Asp Ser Asp Lys Tyr Phe Ile Glu Asp Gly Gln Leu Val 351 565 570 575		Ser		Gln	Ala	Ser	Ile		Trp	Arq	Gly	Asp		Arq	Asp	Leu	Gln
350 Glu Arg Gly Asp Ser Asp Lys Tyr Phe Ile Glu Asp Gly Gln Leu Val 351 565 570 575									_	,	4	_	-		-		
351 565 570 575			Arg	Gly	Asp	Ser		Lys	Tyr	Phe	Ile		Asp	Gly	Gln	Leu	Val
354 Ile Gln Ser Leu Asp Tyr Ser Asp Gln Gly Asn Tyr Ser Cys Val Ala				-	-		-	_	_					_			
	354	Ile	Gln	Ser	Leu	Asp	Tyr	Ser	Asp	Gln	Gly	Asn	Tyr	Ser	Cys	Val	Ala

Input Set : A:\Sequence Listing PCTUS04019934.txt
Output Set: N:\CRF4\12302005\J561015.raw

355				580					585					590		
	Ser	Thr	Glu	Leu	Asp	Glu	Val	Glu	Ser	Arg	Ala	Gln	Leu	Leu	Val	Val
359			595		_			600		_			605			
362	Gly	Ser	Pro	Gly	Pro	Val	Pro	His	Leu	Glu	Leu	Ser	Asp	Arg	His	Leu
363		610					615					620				
366	Leu	Lys	Gln	Ser	Gln	Val	His	Leu	Ser	Trp	Ser	Pro	Ala	Glu	Asp	His
367	625					630					635					640
370	Asn	Ser	Pro	Ile	Glu	Lys	Tyr	Asp	Ile	Glu	Phe	Glu	Asp	Lys	Glu	Met
371					645					650					655	
374	Ala	Pro	Glu		Trp	Phe	Ser	Leu	Gly	Lys	Val	Pro	Gly		Gln	Thr
375				660					665					670		_
	Ser	Thr		Leu	Lys	Leu	Ser		Tyr	Val	His	\mathtt{Tyr}		Phe	Arg	Val
379			675	_	_	_		680			_	_	685		_	
	Thr		He	Asn	Lys	Tyr	_	Pro	GLY	GIu	Pro		Pro	vai	Ser	GIU
383		690		en1 .		~ 1	695		5	a1	T	700	D	**- 7	7	77-7
	Thr	vai	vaı	Thr	Pro		Ата	АТА	Pro	GIU		ASI	PIO	vai	Asp	
	705	~1·-	~1	~1	7	710	The sec	7 ~~	7 00	Mot	715	T10	Th~	П~~	T ***	720 Dra
	Arg	GIY	GIU	GIY	725	GIU	IIII	ASII	ASII	730	vai	TIE	1111	ırp	ду S	PLO
391	Leu	7 200	Trn	Mat		Trn	Acn	בומ	Dro		Tla	Gln	Tarr	Ara		Gln
395	пеп	ALG	тъ	740	мър	пр	POII	AIa	745	GIII	116	GIII	TYL	750	Val	GIII
	Trp	Ara	Pro		Glv	Lvs	Gln	Glu		Tro	Lvs	Glu	Gln		Val	Ser
399	111	9	755	200	017	2,0	0111	760			-10	01	765			
	Asp	Pro		Leu	Val	Val	Ser		Thr	Ser	Thr	Phe		Pro	Tyr	Glu
403		770					775					780			•	
406	Ile	Lys	Val	Gln	Ala	Val	Asn	Asn	Gln	Gly	Lys	Gly	Pro	Glu	Pro	Gln
407	785	_				790					795					800
410	Val	Thr	Ile	Gly	Tyr	Ser	Gly	Glu	Asp	Tyr	Pro	Gln	Val	Ser	Pro	Glu
411					805					810					815	
414	Leu	Glu	Asp	Ile	Thr	Ile	Phe	Asn	Ser	Ser	Thr	Val	Leu	Val	Arg	\mathtt{Trp}
415				820					825					830		
	Arg	Pro		Asp	Leu	Ala	Gln		Lys	Gly	His	Leu		Gly	Tyr	Asn
419			835	_	_	_		840		_0	_	,	845			
	Val		Tyr	Trp	Trp	Lys		Ser	GIn	Arg	Lys		Ser	Lys	Arg	His
423	*** 7	850	T	C	***	14a b	855	*** 7	D	77-	7	860	mh se	Com	77-	т1.
	Val	HIS	гаг	ser	HIS		vaı	vaı	Pro	Ата	875	THE	Int	ser	Ald	880
	865 Leu	co~	C3.,	T 011	7.20	870 Bro	Ф.т.	cor	co.	Тугу		v-1	Glu	Wal	Gln	
431	цец	Ser	Gry	Leu.	885	PIO	ıyı	SET	Ser	890	птэ	vaı	GIU	vaı	895	Ara
	Phe	Δen	Glv	Δra		Len	Glv	Pro	Δla		Glu	Trn	Thr	Phe		Thr
435		AUII	O _T y	900	OLY	пси	Cly	110	905	001	OLU	115		910	001	
	Pro	Glu	Glv		Pro	Glv	His	Pro		Ala	Leu	His	Leu		Cvs	Gln
439			915			1		920					925		-1-	
	Ser	Asp		Ser	Leu	Leu	Leu		Trp	Gln	Pro	Pro		Ser	His	Asn
443		930					935		- L			940				
	Gly		Leu	Thr	Gly	Tyr	Leu	Leu	Ser	Tyr	His	Pro	Leu	Asp	Gly	Glu
	945				•	950				•	955			-	-	960
450	Ser	Lys	Glu	Gln	Leu	Phe	Phe	Asn	Leu	Ser	Asp	Pro	Glu	Leu	Arg	Thr
451					965					970					975	

VERIFICATION SUMMARY

DATE: 12/30/2005

PATENT APPLICATION: US/10/561,015

TIME: 09:36:56

Input Set : A:\Sequence Listing PCTUS04019934.txt

Output Set: N:\CRF4\12302005\J561015.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date